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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/368,651	08/05/1999	RAJEEV BHARDWAJ	1400.4101890	5782

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EXAMINER

TRAN, THIEN D

ART UNIT	PAPER NUMBER
2665	19

DATE MAILED: 06/07/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/368,651

Applicant(s)

BHARDWAJ ET AL.

Examiner

Thien D Tran

Art Unit

2665

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 22 March 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-39 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 6,17,26 and 36 is/are allowed.
- 6) ☒ Claim(s) 1-5,7-25,27-35 and 37-39 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) do not apply to the examination of this application as the application being examined was not (1) filed on or after November 29, 2000, or (2) voluntarily published under 35 U.S.C. 122(b). Therefore, this application is examined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

2. Claims 1-4, 8-15, 19-24, 28-34, 38, 39 are rejected under 35 U.S.C. 102(e) as being anticipated by Acharya et al (U.S Patent No. 6,343,326 B2).

Regarding claims 1, 13, 21, 32, Acharya discloses a method for providing multicast transmissions using a distributed node having a route and an ATM switch (router), col.4 lines 50-60, the method comprises the steps of:

determining, for a source virtual network, a list of communication switching virtual networks (subnetworks) for multicast traffic based on multicast routing protocol (col.6 lines 20-25);

determining group of multicast addresses or group member on a downstream connection (multicast group membership on a per downstream virtual network), edge device, and port basis, col.7 lines 40-50, col.11 lines 35-60;

receiving a packet via the source virtual network;

upon receiving the packet, initializing the routing table for establishing the connection, including the set-up connection of multicast protocol (generating a multicast session table entry based on the list of downstream virtual networks and the multicast group membership), col.5 lines 1-25, col.6 lines 55-65;

establishing virtual connections between the source virtual network and edge devices coupled to virtual networks identified in the list of downstream virtual network, col.14 lines 35-50; and

generating the flow table and storing it in the switch/edge device (downloading the multicast session table entry to the edge devices), wherein the distributed node (router) comprises edge switch (device), col.6 line 65 to col.7 line 5, figure 10.

Regarding claims 10, 30, 11, Acharya discloses a method for providing multicast transmissions using a distributed router, the method comprises the steps of

generating a routing table at the router in case of multicast based on topology of virtual networks, figure 1a;

generating a group affiliation table based on multicast group membership, figure 1b;

generating a multicast session table entry from the routing table and the group affiliation table when a data packet is detected for a group, figure 1c; and

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establishing virtual connections based on the multicast session table entry to transport the data packet to members of the group, col.11 lines 35-45.

Regarding claims 2, 14, 22, 33, Acharya discloses generating the multicast session table entry to include ports of the edge devices that are coupled to at least one of a designated router (legacy router) and a host. See col.12 lines 10-15.

Regarding claims 3, 12, 23, 31, Acharya discloses a method of receiving a information message for recognizing a specific multicast group (routing protocol message), col.12 lines 5-10, from a router associated with one of a plurality of virtual subnetworks, wherein the plurality of virtual subnetworks includes the source virtual subnetworks and the destination virtual subnetworks;

interpreting the routing protocol message to determine ports of the edge devices coupled to downstream routers;

sending, via the ports, routing protocol messages to the downstream routers.

See col.9 lines 20-25, lines 50-67.

Regarding claims 4, 15, 24, 34, Acharya discloses a method of providing a membership query on a virtual subnetwork;

receiving, via a port of one of the edge devices, a report in response to the membership query; and

suppressing forwarding of the report to other ports of the virtual subnetwork. See col.9 lines 50-67.

Regarding claims 8 19, 28, 38, Acharya discloses a method of

receiving a query from a designated router (legacy router), col.12 lines 5-15;

forwarding the query to a plurality of virtual subnetworks, wherein the edge devices support the plurality of virtual of subnetworks via ports, col.14 lines 35-40;
receiving reports from the ports for each of the plurality of virtual subnetworks;
and
upon receiving reports per query interval, forwarding up to a given number of reports to the legacy router. See col.12 lines 35-65.

Regarding claims 9, 20, 29, 39, Acharya discloses send a response (report) after number of responses forwarded to the designated router. See col.12 lines 10-30.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 5, 7, 16, 18, 25, 27, 35, 37 are rejected under 35 U.S.C. 103(a) as being unpatentable over Acharya et al (U.S Patent No. 6,343,326 B2) in the view of Dunstan et al (U.S Patent No. 6,654,371 B1).

Regarding claims 5, 7, 16, 18, 25, 27, 35, 37 Acharya discloses a method of providing a group specific membership query to the port of the one of the edge devices; and

when a response (report) is received in response to the group specific membership query, maintaining the port of the one of the edge devices within the multicast group membership, col.12 lines 15-25.

Acharya does not disclose receiving a leave message via a port of one of the edge devices, wherein the leave message indicates that a member desires to leave a multicast group. However, Dunstan discloses that the leave message send IGMP an endstation when the endstation desires to leave the multicast group, col.4 lines 5-30. Therefore, it would have been obvious to one having ordinary skill in the art to have the feature of leave message in the system of Acharya so that the endstation can exit the multicast group properly.

Allowable Subject Matter

5. Claims 6, 17, 26, 36, are allowed.

Conclusion

6. Any inquiry concerning this communication or earlier communication from the examiner should be directed to Thien Tran whose telephone number is (703) 308-4388. The examiner can normally be reached on Monday-Friday from 8:30AM to 5:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Huy Vu, can be reached on (703) 308-6602. Any inquiry of a general nature of relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 305-3900.


STEVEN NGUYEN
PRIMARY EXAMINER